

**Environment and Natural Resources Trust Fund**

# 2021 Request for Proposal

## **General Information**

**Proposal ID:** 2021-313

**Proposal Title:** Stop Starry Invasion - Community Invasive Species Containment

## **Project Manager Information**

**Name:** Jeff Forester

**Organization:** Minnesota Lakes and Rivers Advocates

**Office Telephone:** (952) 854-1317

**Email:** jeff@mnlakesandrivers.org

## **Project Basic Information**

**Project Summary:** MLR will contain starry stonewort (Nitellopsis obtusa) in the 15 lakes where it currently exists using civic organizing, waterless boat cleaning stations, and social messaging enhancements at these lakes.

**Funds Requested:** $1,676,000

**Proposed Project Completion:** 2024-07-31

**LCCMR Funding Category:** Aquatic and Terrestrial Invasive Species (D)

## **Project Location**

**What is the best scale for describing where your work will take place?** Statewide

**What is the best scale to describe the area impacted by your work?** Statewide

**When will the work impact occur?** During the Project and In the Future

## **Narrative**

**Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.**

Michigan discovered starry stonewort in 2005 and took no direct action to contain it. Today over 1,000 Michigan lakes are infested. Minnesota discovered starry stonewort in 2015 in Lake Koronis. Fourteen lakes with thirty public accesses are now infested. Each is a vector of spread. Starry stonewort is difficult and expensive to manage, prefers high quality waters, and significantly impacts fishing, boating, and swimming.

Since 2017 the Minnesota Aquatic Invasive Species Research Center and Extension Service has run a robust early detection program called “Starry Trek.” Over 200 volunteers survey hundreds of high risk MN lakes. The MN DNR, counties and lake associations also run organized early detection efforts for starry stonewort. There is hope that this highly destructive species is not widespread and that containment efforts should be pursued.

Starry stonewort is perhaps the most concerning AIS in Minnesota. It is expensive to manage and is very resilient.. But there is still time to contain it and prevent spread and save millions in ongoing management costs. Lake Koronis now spends over $200,000 annually on starry stonewort mitigation to keep the public access usable. Without action now, spread of SSW to Minnesota’s premier lakes is imminent.

**What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.**

The Best Management Practice, BMP, is to completely clean, drain and dry all watercraft and water-related equipment when leaving a water body, yet boaters are provided no tools. Surveys consistently find lack of tools to be a major obstacle to BMP compliance. MLR will install waterless watercraft cleaning stations with wet/dry vacs, high pressure air, scrubbers, grabbing tools, undercarriage and overhead lights, and drain plug wrenches. Public use instructions can be included on equipment. The units can be internet-enabled to send detailed use data and alerts to managers.

This project will turbocharge clean, drain, dry BMPs by installing waterless boat cleaning stations at all thirty accesses. Hennepin County found that when waterless boat cleaning stations are combined with organized community engagement, signage, careful location, and pavement markings, AIS violation rates can be reduced by 70+%.

MLR will deploy these systems, with support from associations and local government, and use civic organizing strategies to elevate local awareness and support. Research shows lakes within 50 miles of an infestation are at higher risk.

This strategy has never been deployed to contain an emerging AIS. With only fourteen lakes infested, we hope to provide a protocol for containing future invasions by new

**What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state’s natural resources?**

Our goal is to protect, conserve and preserve Minnesota's waters by preventing the further spread of starry stonewort.
We will further evaluate the success of the program by collecting and correlating two key variables: education impressions and behavior changes. Thereby, we can evaluate the impacts of our educational/civic organizing efforts by correlating the adoption of BMPs to education/outreach over the lifecycle of the campaign. These efforts will result in long-term educational infrastructure that reduces risk of not only starry stonewort spread, but all other AIS, after the project is over.

## **Activities and Milestones**

### **Activity 1: Admin, Build Local Partners, Travel, Selecting Sites, Supervise Instal, Enhancing Launches w/Behavioral Cues, Education, Manage Project**

**Activity Budget:** $137,320

**Activity Description:**Minnesota Lakes and Rivers Advocates will identify key local partners and work with them to choose the best sites to instal waterless cleaning stations, plan access upgrades, and design strategic local AIS education efforts.

Priority will be given to lakes ranked by two criteria:
1. Lakes ranked as highest risk for originating spread by Minnesota Aquatic Invasive Species Research Center using their risk assessment algorithm,
2. Support of local community partners.

These partners will design and implement education ranging from pavement striping, signage, video content, and stop bars. These water access site upgrades will guide traffic flow and educate users. Supporting education and creating a broad base of committed active citizens will catalyze the use of waterless cleaning stations.

We will evaluate the success of the program by collecting and correlating two key variables: education impressions and behavior. Thereby, we can evaluate the impacts of our educational efforts by correlating the adoption of BMPs to education/outreach over the lifecycle of the campaign. These efforts will result in long-term educational infrastructure that reduces risk of not only starry stonewort spread, but all other AIS, after the life of the project is finished.

**Activity Milestones:**

|  |  |
| --- | --- |
| **Description** | **Completion Date** |
| Identify local partners, create civic workgroup to carry local process | 2021-05-31 |
| Negotiate w/Install owner - secure permissions | 2021-06-30 |
| Administration of Process | 2023-12-31 |
| Use year 1 data via IoT platform to adjust community based marketing/education strategies | 2023-12-31 |

### **Activity 2: Tech/site advice Install, Manufacture and deliver 29 CD3 Stations, Provide and Supervise IoT services**

**Activity Budget:** $1,538,680

**Activity Description:**The supplier of the waterless cleaning stations will be chosen through an RFP process, but so far only one, the CD3, has been identified. CD3s are built in Minnesota, in use across North America, are internet-connected to transmit use data and maintenance needs to managers of the equipment, and have all the tools required to meet current BMPs. CD3s have low maintenance costs and are designed to last at least ten years. Additionally, CD3s are an example of a success story of catalyzing innovation in invasive species management via the Lessard Outdoor Heritage Fund dollars via the Initiative Foundation grants. CD3s provide lights, wet/dry vacuum, air blower, hand tools for physical AIS removal, and a drain plug wrench so boaters can effectively Clean, Drain and Dry their water-related equipment. Because the selected boat cleaning station manufacturer has the knowledge and experience we will rely on their technicians to install the equipment. These systems will be free to boaters.

The project will cover the cost of the equipment, installation, software, and annual costs including maintenance, insurance, replacement of tools, and the software interface platform for three years. After three years the stations will be given to local partners.

**Activity Milestones:**

|  |  |
| --- | --- |
| **Description** | **Completion Date** |
| Build and enable IoT data systems | 2021-06-30 |
| Deliver and Instal waterless cleaning systems | 2021-06-30 |
| Site Selection on water accesses | 2021-06-30 |
| Final Report/Case Study | 2024-01-31 |

## **Long-Term Implementation and Funding**

**Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?**The results of the project will be written as a case study and distributed by MLR to partners, MAISRC, and the media. Our hope is that this strategy can be used to contain any new-to-state AIS. This project will cover the cost of equipment, software, and annual costs including maintenance, insurance, replacement of tools, and the software interface platform for three years. After that time the stations will be given to the supporting partners who will assume annual costs (about $1,500 per unit annually).

## **Project Manager and Organization Qualifications**

**Project Manager Name:** Jeff Forester

**Job Title:** Executive Director

**Provide description of the project manager’s qualifications to manage the proposed project.**Jeff Forester has been a leader in Aquatic Invasive Species prevention efforts in MN since 2009. At the start he recognized that no group or agency can solve the aquatic invasive species problem alone. There is a critical need to bring together active citizens, professional resource managers, and science in a productive partnership.

Due to his work with Minnesota Lakes and Rivers, he has strong local relationships with lake associations across the state, including the key lakes that will be a part of this project. His organization worked to pass the County AIS Prevention Aid formula in 2014, and following that hosted a series of large Aquatic Invaders Summits, bringing together over 450 local AIS Coordinators, State AIS professionals, and active citizens.

Over that time Jeff realized that the intense and ongoing planning and action required by multiple partners, each with differing jurisdictions and authorities, to implement an effective AIS plan required a different model that traditional civic engagement.

At the suggestion of the Citizen’s League, Minnesota Lakes and Rivers began working with a Civic Organizing model developed, governed and licensed by the Midwest Active Citizenship Initiative. After four years of study, Jeff became a designated Lead Organizer, affording him the opportunity to use the model. Jeff is one of two designated Lead Organizers that work in the water arena in Minnesota. He currently has Civic Organizing pilots to address AIS in Ramsey County and in northern St. Louis County in an attempt to address AIS introduction into the BWCAW.

**Organization:** Minnesota Lakes and Rivers Advocates

**Organization Description:**Minnesota Lakes and Rivers Advocates was formed in 1993 to “Protect Minnesota’s Lake and River Heritage for current and future generations by forging powerful links among lakes, lake advocates and policy makers.” MLR has over 250 lake association members and over 6000 individual members including resort owners, marina owners, and anglers.

MLR has organized three Aquatic Invaders Summits, each of which drew over 400 people from across Minnesota and neighboring states. The Summits featured local, national and international experts on Aquatic Invasive Species, AIS issues and programs. The Summits’ goal has been to increase communication, collaboration and cooperation among the many groups working to prevent the spread and manage the current infestations of AIS in Minnesota.

MLR works in the nexus of local government units, academia, state agencies like MN DNR, and MPCA and local civic groups to address AIS and other water quality issues. At the 2015 Aquatic Invaders Summit, MLR convened a host of partners to develop the first Local AIS Action Framework, LAAF which was adjusted and approved by attendees at the 2015 Aquatic Invaders Summit including many local units of government. The LAAF is now posted on the DNR AIS website.

## **Budget Summary**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category / Name** | **Subcategory or Type** | **Description** | **Purpose** | **Gen. Ineli gible** | **% Bene fits** | **# FTE** | **Class ified Staff?** | **$ Amount** |
| **Personnel** |  |  |  |  |  |  |  |  |
| Project Manager |  | Administration and Management |  |  | 0% | 0.54 |  | $43,200 |
| Site Project manager |  | On site mgr for install and 3 years management, data collection, upkeep and contact. |  |  | 0% | 0.27 |  | $39,000 |
|  |  |  |  |  |  |  | **Sub Total** | **$82,200** |
| **Contracts and Services** |  |  |  |  |  |  |  |  |
| Fish and Wasters Conservation Fund | Sub award | Lead organizer and community contact, site selection, coordinate partners, data collection and analysis, and writing final report. Additional fundraising and match to complete project. |  |  |  | 0.6 |  | $83,415 |
| CD3 | Professional or Technical Service Contract | Provide technical advice and support planning, provide IoT software, set up, and digital kiosks. |  |  |  | 0 |  | $146,150 |
|  |  |  |  |  |  |  | **Sub Total** | **$229,565** |
| **Equipment, Tools, and Supplies** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Capital Expenditures** |  |  |  |  |  |  |  |  |
|  |  | CD3 Boat Cleaning Stations | To provide the tools and education at the place boaters need these tools and education so that they can effectively Clean, Drain and Dry watercraft and water related equipment before leaving the water access site. |  |  |  |  | $847,125 |
|  |  |  |  |  |  |  | **Sub Total** | **$847,125** |
| **Acquisitions and Stewardship** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Travel In Minnesota** |  |  |  |  |  |  |  |  |
|  | Miles/ Meals/ Lodging | 11,448 | Identifying Partners, Selecting Sites, and Enhancing Boat Launches with Outreach and Behavioral Cues Minnesota Lakes and Rivers Advocates will identify key local partners and work with them to choose the best sites to instal waterless cleaning stations, plan access upgrades, and design strategic local AIS education efforts and ongoing programs in support of preventing the spread of AIS. |  |  |  |  | $6,239 |
|  | Miles/ Meals/ Lodging | 3,816 miles | Travel required by project manager to install, Service and Maintain Waterless Cleaning Stations at 28 Boat Ramps for 3 Years. |  |  |  |  | $2,080 |
|  | Miles/ Meals/ Lodging | Lodging, Per Diem and Incidentals (Per "Commissioner's Plan" ($71 M&IE +$124 Lodging) - 5 days/nights | Lodging and per diem requisite to Identifying Partners, Selecting Sites, andIdentifying Partners, Selecting Sites, and Enhancing Boat Launches with Outreach and Behavioral Cues and ongoing support of local AIS efforts. |  |  |  |  | $976 |
|  | Miles/ Meals/ Lodging | Install, Service and Maintain Waterless Cleaning Stations at 28 Boat Ramps for 3 Years | Lodging, Per Diem and Incidentals (Per "Commissioner's Plan" ($71 M&IE +$124 Lodging) 1 day/night |  |  |  |  | $195 |
|  |  |  |  |  |  |  | **Sub Total** | **$9,490** |
| **Travel Outside Minnesota** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Printing and Publication** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Other Expenses** |  |  |  |  |  |  |  |  |
|  |  | Creating starry stonewort specific video and content for education | Support Partner's AIS messaging, Social Marketing, and Enhancing Boat Launches with Outreach and Behavioral Cues - video will play on user phones. |  |  |  |  | $22,505 |
|  |  | 3 years of Insurance (29 units x3 years x $1,200/unit/year) | Insure Equipment |  |  |  |  | $130,500 |
|  |  | Signage and pavement marking | Facilitate boaters' movements to the stations for cleaning, support social messaging and increase use |  |  |  |  | $137,750 |
|  |  | Yearly maintenance | To maintain the units, replace tools, and pump-out vacuum tanks and winterize 29 units. |  |  |  |  | $26,100 |
|  |  | Digital Kiosk with IoT capacity | Create local WiFi for video content to user, connect IoT to cell system to send real time use data and maintenance, ex. holding wet vacuum tank full. 3 years for 29 units. |  |  |  |  | $82,650 |
|  |  | Software use | 3 years software license, 29 units for 3 years. |  |  |  |  | $55,100 |
|  |  | Software set up fees | Software set up fees for 7 counties - one time fee. |  |  |  |  | $8,400 |
|  |  |  |  |  |  |  | **Sub Total** | **$463,005** |
|  |  |  |  |  |  |  | **Grand Total** | **$1,631,385** |

### **Classified Staff or Generally Ineligible Expenses**

|  |  |  |  |
| --- | --- | --- | --- |
| **Category/Name** | **Subcategory or Type** | **Description** | **Justification Ineligible Expense or Classified Staff Request** |

### **Non ENRTF Funds**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Specific Source** | **Use** | **Status** | **Amount** |
| **State** |  |  |  |  |
| Cash | County AIS Prevention Aid, Pope County | General support of Stop Starry project to put waterless boat cleaning stations at all accesses on all starry stonewort infested lakes in Minnesota, and use civic organizing, education and social marketing to support use. Stations prioritized using MAISRC risk assessment algorithm and community capacity. | Secured | $5,000 |
| In-Kind | County AIS Prevention Aid, Hennepin County | Purchase, instal and management of waterless boat cleaning station at Medicine Lake, Three Rivers Park District, Plymouth for three years. | Secured | $45,000 |
| Cash | County AIS Prevention Aid, Itasca County | General support of Stop Starry project to put waterless boat cleaning stations at all accesses on all starry stonewort infested lakes in Minnesota, and use civic organizing, education and social marketing to support use. Stations prioritized using MAISRC risk assessment algorithm and community capacity. | Pending | $10,000 |
| Cash | County AIS Prevention Aid, Beltrami County | General support of Stop Starry project to put waterless boat cleaning stations at all accesses on all starry stonewort infested lakes in Minnesota, and use civic organizing, education and social marketing to support use. Stations prioritized using MAISRC risk assessment algorithm and community capacity. 3 years. | Pending | $7,500 |
| Cash | County AIS Prevention Aid, Becker County | General support of Stop Starry project to put waterless boat cleaning stations at all accesses on all starry stonewort infested lakes in Minnesota, and use civic organizing, education and social marketing to support use. Stations prioritized using MAISRC risk assessment algorithm and community capacity. | Pending | $6,000 |
| Cash | County AIS Prevention Aid, Douglas County | General support of Stop Starry project to put waterless boat cleaning stations at all accesses on all starry stonewort infested lakes in Minnesota, and use civic organizing, education and social marketing to support use. Stations prioritized using MAISRC risk assessment algorithm and community capacity. | Pending | $15,000 |
| Cash | County AIS Prevention Aid, Cook County | General support of Stop Starry project to put waterless boat cleaning stations at all accesses on all starry stonewort infested lakes in Minnesota, and use civic organizing, education and social marketing to support use. Stations prioritized using MAISRC risk assessment algorithm and community capacity. | Secured | $1,500 |
|  |  |  | **State Sub Total** | **$90,000** |
| **Non-State** |  |  |  |  |
| Cash | Island Lake Association | General support of Stop Starry project to put waterless boat cleaning stations at all accesses on all starry stonewort infested lakes in Minnesota, and use civic organizing, education and social marketing to support use. Stations prioritized using MAISRC risk assessment algorithm and community capacity. | Secured | $150 |
|  |  |  | **Non State Sub Total** | **$150** |
|  |  |  | **Funds Total** | **$90,150** |

## **Attachments**

### **Required Attachments**

#### ***Visual Component***

File: [a342566b-d68.pdf](https://lccmrprojectmgmt.leg.mn/media/map/a342566b-d68.pdf)

#### ***Alternate Text for Visual Component***

The maps show site analysis for each of the 29 public water access sites where solar powered waterless boat cleaning stations will be located. Each site will be ranked by two criteria; 1) potential risk as a source of starry stonewort spread based on the MAISRC risk assessment tool, 2) local support for the project and potential partnerships. We will deploy waterless as funding becomes available.

#### ***Financial Capacity***

File: [2c38f72a-af9.pdf](https://lccmrprojectmgmt.leg.mn/media/financial_capacity/2c38f72a-af9.pdf)

#### ***Board Resolution or Letter***

|  |  |
| --- | --- |
| **Title** | **File** |
| MLR Board resolution in support | [ccf74b20-3ab.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/ccf74b20-3ab.pdf) |

### **Optional Attachments**

#### ***Support Letter or Other***

|  |  |
| --- | --- |
| **Title** | **File** |
| Lake Koronis Assoc. Ltr of Support | [42b768db-c07.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/42b768db-c07.pdf) |
| Cass SWCD Support Ltr. | [e5bddd9b-fb9.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/e5bddd9b-fb9.pdf) |
| UofM NRRI Support Ltr | [339cc057-e28.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/339cc057-e28.pdf) |
| Nat'l Pro. Anglers Support Ltr | [8fcb125e-ccc.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/8fcb125e-ccc.pdf) |
| Cass Co. Env. Services Ltr. Support | [5cb711c3-e68.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/5cb711c3-e68.pdf) |
| Lake Sylvia Support Ltr | [310e6eba-74a.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/310e6eba-74a.pdf) |
| Pope County Support Ltr. | [f9336240-b80.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/f9336240-b80.pdf) |
| Initiative Foundation Support Ltr. | [d69c3b44-4f6.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/d69c3b44-4f6.pdf) |
| Beltrami County Support Letter | [80a17b7f-99a.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/80a17b7f-99a.pdf) |
| Stearns County Support Ltr. | [15f0b7e3-bb7.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/15f0b7e3-bb7.pdf) |

## **Administrative Use**

**Does your project include restoration or acquisition of land rights?**
 No

**Does your project have patent, royalties, or revenue potential?**
 No

**Does your project include research?**
 No

**Does the organization have a fiscal agent for this project?**
 No